

March 5, 1957

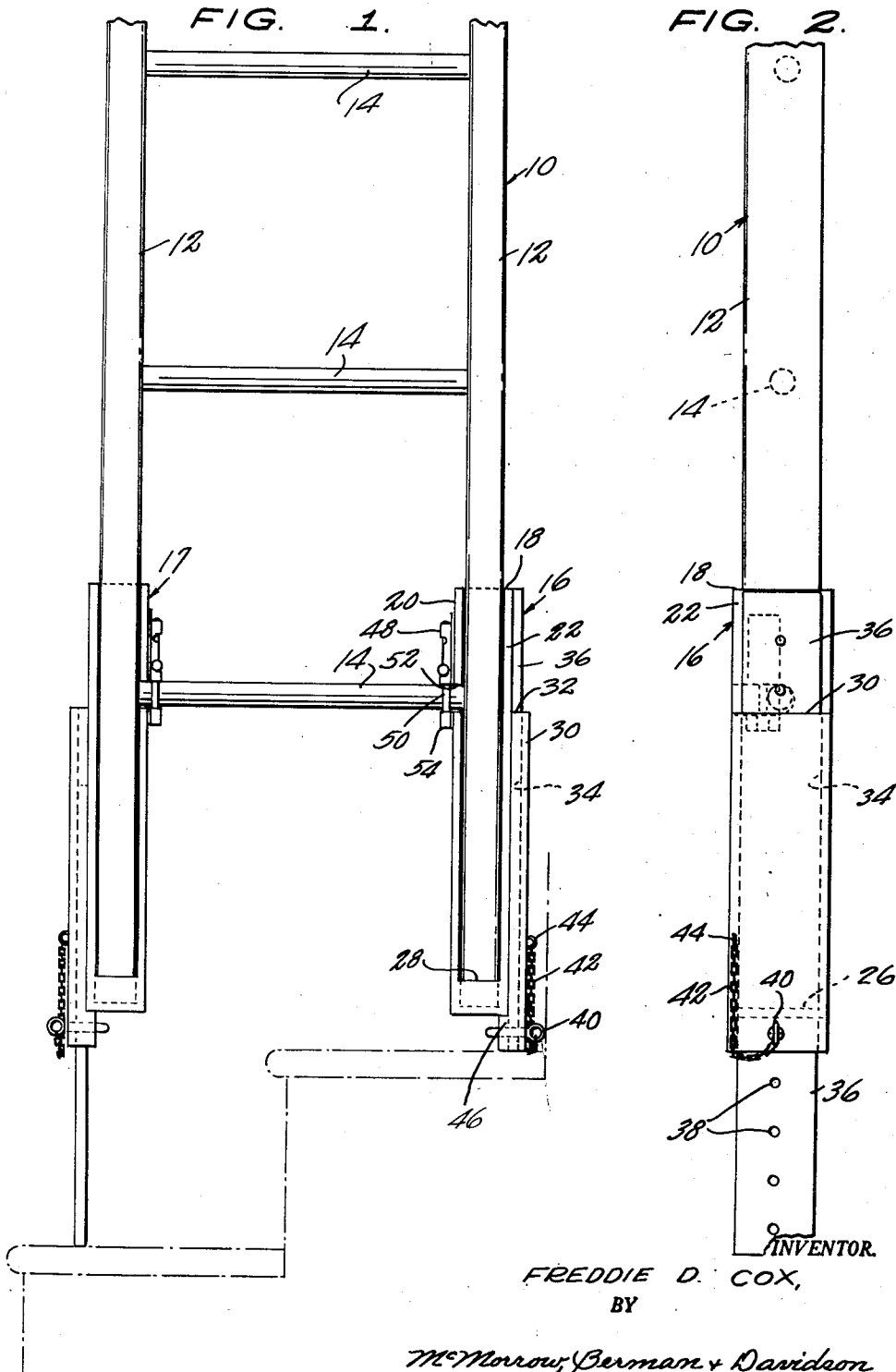
F. D. COX

2,783,928

EXTENSION DEVICE FOR LADDERS

Filed May 27, 1955

2 Sheets-Sheet 1



FREDDIE D. COX,
BY

McMorrow, Berman & Davidson
ATTORNEYS.

March 5, 1957

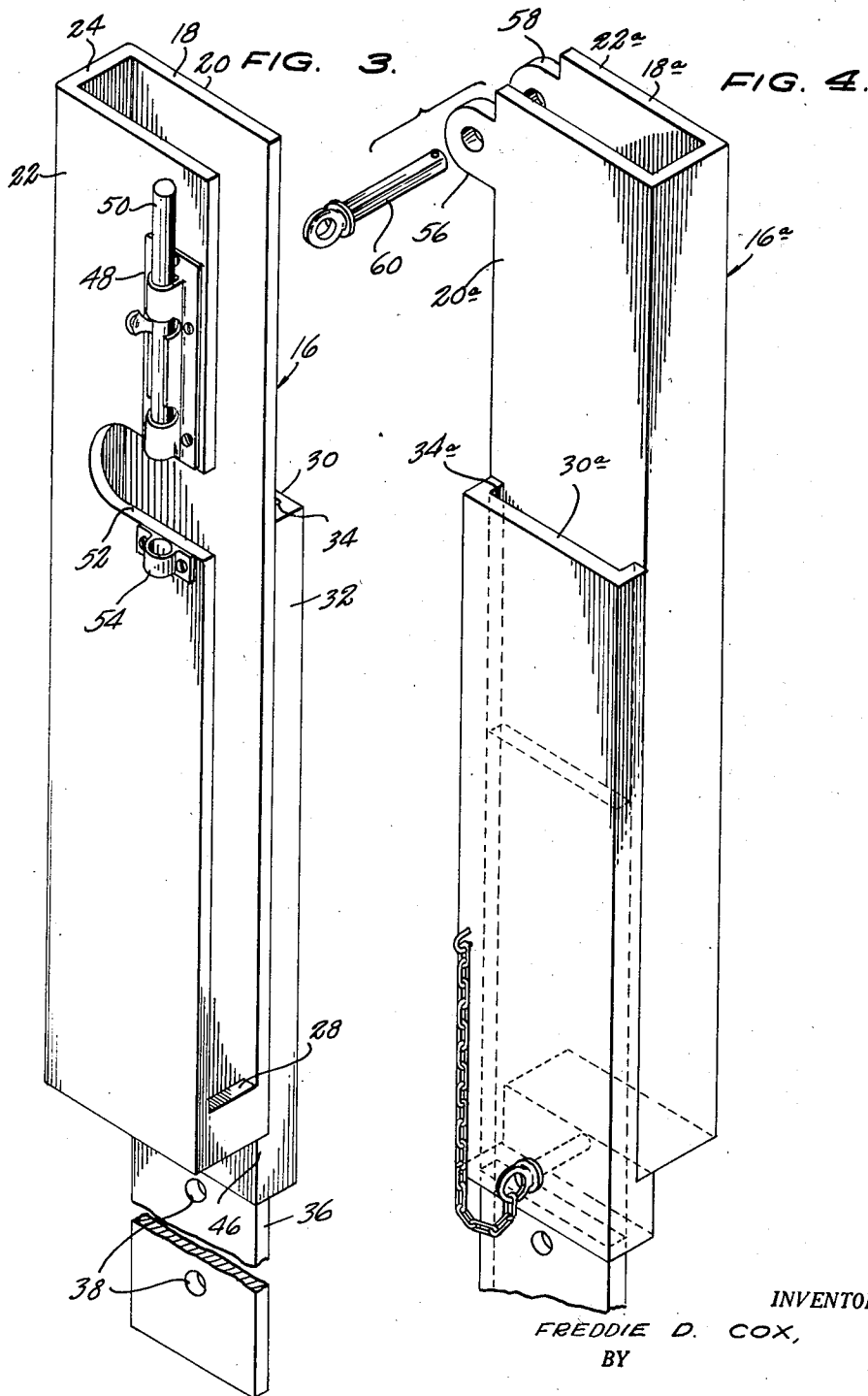
F. D. COX

2,783,928

EXTENSION DEVICE FOR LADDERS

Filed May 27, 1955

2 Sheets-Sheet 2



INVENTOR.
FREDDIE D. COX,
BY

McMorrow, Berman & Davidson
ATTORNEYS.

1

2,783,928

EXTENSION DEVICE FOR LADDERS

Freddie D. Cox, Shreveport, La.

Application May 27, 1955, Serial No. 511,446

1 Claim. (Cl. 228—63)

This invention relates to an extension device attachable to the side rails of a ladder, for adjustment to selected positions beyond said side rails, whereby to level or maintain in a properly vertical position a ladder that is supported upon an uneven surface.

It is very difficult to properly level a ladder, where the ground on which it is supported is uneven, and under these circumstances, it is desirable that one side rail of the ladder be longer than the other. Heretofore, it has been proposed to provide extension means for a ladder, which will permit the ladder to be leveled when used on uneven ground, on stairs, etc.

The present invention has as its main object the provision of a generally improved means of the type referred to, characterized by its relative simplicity, its ease of attachment to and detachment from an associated, wholly conventional ladder, and by its ability to withstand heavy use and to support substantial loads.

Another object of importance is to provide a device as described which, when made in pairs and used one at each side of a ladder, will be adapted to provide a highly effective leveling agent regardless of the slope or uneven location at which the ladder is being used.

Still another object of importance is to provide a device as stated which can be extended to a selected length, and locked in place, with maximum ease and facility, the device being characterized, in this regard, by its employment of readily removable or adjustable locking bolts, in association with the metallic body portion and related components of the body.

Other objects will appear from the following description, the claim appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is an elevational view of a ladder, the ladder being shown fragmentarily, in association with a pair of the extension devices, the ladder being illustrated as it appears when supported on a stairway, the stairway being shown in dotted outline;

Figure 2 is an elevational view of a ladder and extension device as seen from the right of Figure 1;

Figure 3 is a front perspective view of the device on an enlarged scale, in which a portion of the extension bar has been broken away; and

Figure 4 is a partially exploded perspective view showing a modified construction, the side opposite that shown in Figure 1 being illustrated.

The reference numeral 10 has been applied generally to a conventional ladder having the usual side rails 12 between which are connected rungs 14.

A pair of extension ladder attachments 16, 17 has been shown in Figure 1. The devices making up a pair are oppositely but identically formed. Therefore, it is believed that the description of the device 16 will suffice for that shown at 17.

As shown in Figure 3, the side rail extension device 16 includes a body 18 formed as an elongated channel, having flat side walls 20, 22 connected by a web 24.

2

At its lower end (Figure 2) the body 18 is closed by an end wall 26, and integrally formed upon the body, at the open front thereof, is an upstanding flange 28 projecting above the end wall and extending transversely of the open front of the body, to provide an abutment which will engage the lower extremity of a side rail seated upon the end wall against accidental movement forwardly out of the body.

Welded or otherwise rigidly secured to the side wall 20 is an elongated, flat guide plate 30, formed at opposite sides thereof with longitudinal flanges 32 defining between them a guideway 34 for an extension bar 36 having a longitudinal series of apertures 38 adapted to receive a pin 40 suspended from a chain 42 attached to the guide plate, through the medium of an eye 44.

The channeled guide plate defining the guideway 34 has, at its lower end, an inwardly projecting shoulder 46, engaging the lower extremity of the body 18. The guide plate is fixedly secured to the body 18, but the provision of the shoulder causes the pressure exerted downwardly on the ladder by use thereof to be taken upon said shoulder, rather than solely upon the welded connection between the guide plate and body.

The guide plate can be integral with the body or secured fixedly thereto in any known manner.

Formed in side wall 22 of the body, and opening upon the front of the body is a transverse slot 52 having a rounded inner end wall engaging the rung 14 of the ladder.

A latch 48 includes a sliding bolt 50, mounted to slide across the open end of the slot 52, to lock the rung therein. A keeper 54 is disposed adjacent the slot, to receive the bolt after the same has been extended across the slot, thus to strengthen the construction.

With the lower extremity of the side rail engaged against abutment 28, and the rung locked in place by the bolt 50, it will be seen that the ladder cannot be shifted laterally, forwardly or rearwardly relative to the device, with the device being securely engaged therewith. Thereafter, the extension bar 36 is extended to any desired length, and maintained in the selected length, to level the ladder.

In Figure 4, the modified device 16a is identical in all respects to that previously described herein, having a guide plate 30a forming a guideway 34a. This form of the device would have in the side wall 22a thereof a transverse slot identical to that shown at 52 in Figure 3. However, in the modified construction, instead of using a slide bolt 50 engaging the rung, there are provided forwardly projecting ears 56, 58 integrally formed upon the side walls 20a, 22a adjacent the upper end of the device. The ears are formed with transversely aligned openings, receiving a removable lock pin 60, which can be provided at one end with a handle, and at the other end may be formed with a transverse opening adapted to receive a cotter key or the like.

Apart from the use of the ears 56, 58 and pin 60 in place of the sliding bolt latch 48, 50 of Figure 3, the device shown in Figure 4 is identical in every respect to that previously illustrated and described.

It will be seen that the device is used in pairs, can be attached to the side walls of a wholly conventional ladder, with a minimum amount of difficulty, merely by operative positioning of the bolt 50 or pin 60 as the case may be, after the side rail has been seated in the body and the rung disposed within the slot. The devices can be used for leveling the ladder within a wide range of situations encountered during use of the ladder on other than perfectly even surfaces.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose

3

to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claim.

What is claimed is:

An extension device for a ladder having side rails and rungs extending between the side rails, comprising an elongated body formed as a channel closed at one end to receive the lower end of a side rail with the rail supported against the closed end, the body having in one side wall a transverse slot for receiving a rung of the ladder; a latch bolt slidably mounted upon said one side wall for movement across the slot, to prevent the rung from moving out of the slot, thus to engage the rung and side rail against accidental withdrawal from said body; a channeled guide plate extending longitudinally

4

of the body and secured to the other side wall thereof to provide a guideway; an extension bar mounted in said guideway for adjustment longitudinally of the body beyond one end thereof into engagement with a supporting surface; and means releasably interengaging the body and extension bar in selected positions of adjustment of the extension bar.

References Cited in the file of this patent

UNITED STATES PATENTS

809,057	Hester	Jan. 2, 1906
2,245,306	Smith	June 10, 1941
2,517,771	Stefano	Aug. 8, 1950
2,602,580	Noel et al.	July 8, 1952
2,723,071	Merryweather	Nov. 8, 1955

FOREIGN PATENTS

138,512	Great Britain	Feb. 12, 1920
---------	---------------	---------------